

DaBlaCa-9 Summary of findings

An explorative retrospective study was done including all Danish patients who underwent radical cystectomy from January to December 2010. Data collection was finished December 2015, therefore follow-up after surgery was 60-72 months.

No patient received neoadjuvant chemotherapy, as this was not recommended in Denmark at the time. Locally advanced disease (min T3 or any N+) was present in 114 (46%) of patients at the time of cystectomy. Follow-up CT scans were usually done at least at 6, 12 and 24 months, with routine schedules varying significantly between centers.

All-cause mortality: of the 246 patients included, 100 (41%) were deceased at follow-up. For 2 patients, date of death was not recorded. Causes of death were recorded as “bladder cancer” or “other causes”. 13 patients (5.3%) died within 3 months, 42 patients (17%) died within 1 year. Of those who died from all-cause mortality before the 5-6 year follow-up, 43% did so within the first year after surgery.

Only 28 patients (11%) died from causes other than bladder cancer within the follow-up period. 5 patients died within 3 months, and 11 within one year after surgery. It is not known whether these patients died directly or indirectly from surgical complications.

Bladder cancer specific mortality: 72 patients (29% of total population) died due to bladder cancer. Of these, 8 (11%) died within 3 months, and 31 patients (43%) died within one year of cystectomy.

Predictors of mortality:

There was no discernible sex or age difference in percentage with survival at follow-up, death from bladder cancer or death from other causes. T stage, as expected, predicted survival at follow-up. Also, with higher T stage the patients who died were more likely to have bladder cancer as their cause of death. By far, the majority of patients were diagnosed with urothelial carcinoma, and there were too few of other types to stratify by histological subtype. Both patients with sarcoma recurred within 1 year and died within 6 months of recurrence.

Recurrence-free survival: 135 patients (55%) were alive at follow-up with no recurrence.

Recurrence pattern and frequency:

At diagnosis of recurrence, patients were most frequently diagnosed with multiple recurrence sites, followed by (in descending order) lymph nodes only, local recurrence only, lungs only, bone only, liver only. 3 patients had recurrence at other sites (CNS and abdominal). For 2 patients, recurrence site was not recorded.

82 (33%) of all patients had documented disease recurrence within the follow-up time. Median time from cystectomy to diagnosis of recurrence was 8 months (range 0-61). This information was missing for 4 patients. Median time from recurrence to death was 4 months (range 0-34). Only 9 patients were alive with recurrence at 5-year follow-up.

TNM stage was, as expected, associated with recurrence. Of patients with localized disease (N=132), 17 (13%) had recurrence, versus 65 (57%) of those with locally advanced disease (N=114).

In the 17 patients with recurrence after localized disease, 6 patients were diagnosed with recurrence at routine scans and 10 patients were diagnosed with recurrence at extraordinary scans, due to symptoms. 1 patient recurred late, at 47 months, but was described as asymptomatic. However, Rigshospitalet and Odense University Hospital did not routinely scan these patients at follow-up, making it difficult to compare with the patients with locally advanced disease.

Of the 114 patients with locally advanced disease, 65 recurred. About half of recurrences were found at routine scans, half were detected at extraordinary scans.

Symptoms at recurrence:

Whether or not there were symptoms at the time of recurrence was documented in 79 of 82 patients. 32 patients (41%) had no documented symptoms at recurrence. 38% had pain as the main presenting symptom, 11% had only general symptoms such as fatigue or weight loss, 6% had only pulmonary symptoms (all of these patients had pulmonary metastases), and 4% had only other symptoms, such as bloody secretion from vagina. Some patients were diagnosed with recurrence at a routine, planned CT scan, but when inquired about symptoms they reported pain, weight loss or other symptoms.

Unfortunately, the documentation of symptoms at recurrence was not systematic, and there is no documentation of any symptoms in patients who did not recur.

We estimated that 45% of recurrences were detected at routine scans (keeping in mind that some patients had symptoms at that time). Almost 50% of recurrences were detected at extraordinary scans, due to symptoms. Recurrence at routine scans were detected at a median of 10 months after cystectomy (range 2-48), which was no different from recurrence detected by extraordinary scans, median time postoperatively 8 months (range 0-61). In the remaining 5 patients with recurrence, it was not known whether the recurrence was likely detected at a routine scan or due to symptoms. For both groups (recurrence diagnosed routinely or because of symptoms), the 90th percentile was about 36, meaning that 90 % of recurrences were diagnosed within 36 months.

Conclusion:

In this retrospective study of 246 patients after radical cystectomy, 33% of the population had documented recurrence at the time of follow-up. About half of the recurrences were detected by routine scheduled scans, the other half at extraordinary scans because of symptoms. Survival after recurrence was very poor. A major limitation was the unsystematic documentation of symptoms at recurrence, and the lack of documentation of possible symptoms in patients with no recurrence. Therefore, the data quality was deemed insufficient for publication of the study.

This exploratory study can be a platform for future studies of associations between symptoms and recurrence, which must be prospective and may help to elucidate “alarm symptoms” of recurrence and the value of routine CT scans for follow-up after radical cystectomy.